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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,402

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Zoltan Horvath

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466 7590 10/13/2010  
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EXAMINER

YANG, QIAN

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

10/13/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,402	<b>Applicant(s)</b> HORVATH ET AL.	
	<b>Examiner</b> QIAN YANG	<b>Art Unit</b> 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10,11,13-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,11,13-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 24, 2010 has been entered.

### ***Response to Amendment***

2. Applicant's amendment filed on June 24, 2010 has been entered. Claims 1, 4 – 6, 8, 10, 11, 13 – 15 and 18 – 20 have been amended. Claims 2, 9, 12 and 16 have been canceled. No claims have been added. Claims 1, 3 – 8, 10, 11, 13 – 15 and 17 – 20 are still pending in this application, with claims 1, 11 and 15 being independent.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1, 3 – 7, 11, 13 – 15 and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alderton (US Patent 3,635,557) in view of Bock (US Patent 5,012,275).

Regarding claim 1, Alderton discloses a method for imaging a primarily two-dimensional target (T) (**method for photographically copying book pages**), comprising:

matching at least one optical unit (M) (**#14 mirror and prism #12 in Figure**) adapted for influencing a direction of rays of light falling onto the target (T);

pressing down a surface of the target (T) by the at least one optical unit (M) to gain a flat surface for mapping (**side #18 of prism #12 pressed against #30 in Figure**);

illuminating the target (T) by applying a light source (L) (**light source #17 in Figure**)

providing homogenous diffused light (**col. 2, lines 55 – 60**);

directing a means for recording optics (**#28**) to the optical unit (M) (**#14 and #12 in Figure**);

mapping points of the target (T) reaching the means for recording optics through the optical unit (M) by projecting rays originating from points of the target (T) at right angles to the target (T) through the optical unit (M) to a means for sensing of the means for recording optics in the whole range of an optical angle of the means for recording optics (**col. 2, line 67 to col. 3, line 6**); and

displacing the means of recording optics (**#28 in Figure**) in a receding manner from a plane of the target (T).

However, Alderton fails to explicitly disclose wherein the method eliminating reflections and ghost images deteriorating the resulting image by turning away the means for recording optics at a predetermined angle  $\alpha$  in a curved course compared to an optical axis (OA) originating from a centre of the target (T) while tilting the optical unit (M) half to an extent of said displacement with an angle  $\alpha/2$  of the means for recording optics.

However, in a similar field of endeavor Bock discloses a method for copying bound books. In addition, Bock discloses the method wherein turning away the means for recording optics at a predetermined angle  $\alpha$  in a curved course compared to an optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle  $\alpha/2$  of the optical recording means (**col. 3, lines 31 – 35**). The purpose of doing this is to make book copying fully enabled and satisfactory (**col. 4, lines 6 – 8; col. 1, lines 19 – 26; col. 3, lines 28 – 35**); and to eliminate the distortions (**This is evidenced by Xu et al. (US Patent Application Publication 2002/0085248) that without turning the recording optics, the scanned image is distorted in the center book bound part (Fig. 1)**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for the means for recording optics and mirror, as taught by Bock. The motivation for doing this is that to make book copying fully enabled, as discussed by Bock (**col. 4, lines 6 – 8**).

Regarding claim 3 (depends on claim 1), Bock discloses the method further comprising choosing the value of the angle  $\alpha$  exceeding at least the half of the optical angle of the means for recording optics (**From Fig. 4 of current invention, the half of the optical angle of the optical recording means is about 10 degree. Bock discloses the rotating angle  $\theta$  can exceed 10 degree in the book binding area**).

Regarding claim 4 (depends on claim 1), Alderton discloses the method further comprising a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 5 (depends on claim 4), Alderton discloses the method further comprising a surface mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 6 (depends on claim 1), Alderton discloses the method further comprising a wedge shaped optical element composed of a pressing-down glass plate (G) and a surface mirror (M) as the optical unit (**#14 mirror and the glass prism #12 in Figure**).

Regarding claim 7 (depends on claim 6), Bock discloses the method further comprising using an optical element with an adjustable front rake (**col. 3, lines 26 – 29**).

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Regarding claim 11, Alderton discloses an arrangement for imaging a primarily two-dimensional target (T), comprising:

at least one optical unit (M) adapted for influencing the direction of rays of light falling onto it (**#14 mirror and prism #12 in Figure**),

the optical unit (M) being configured to press down a surface of the target (T) to obtain a flat surface for mapping (**side #18 of prism #12 pressed against #30 in Figure**);

a light source (L) (**light source #17 in Figure**) illuminating the target (T), the light source (L) being configured to provide homogenous diffused light (**col. 2, lines 55 – 60**);

a means for recording optics (**#28 in Figure**) directed to the optical unit while being directed to the optical unit (**col. 2, line 67 to col. 3, line 6**) the means for recording optics is displaced in a receding manner from the plane of the target (T) (**#28 in Figure**), and originally running at an angle of  $45^\circ$  to the surface of the target (T) (**the angle between #28 and #20 in the Figure is 45 degree**); and

displaced the means of recording optics (**#28 in Figure**) in a receding manner from a plane of the target (T).

However, Alderton fails to explicitly disclose wherein the means for recording optics is turned away at a predetermined angle  $\alpha$  in a curved course compared to the optical axis (OA) originating from the centre of the target (T), while the optical unit is tilted to an extent which is increased by a half of the displacement angle with an angle  $\alpha/2$  of the means for recording optics, such that deleterious reflections and ghost images are eliminated.

However, in a similar field of endeavor Bock discloses a system for copying bound books. In addition, Bock discloses the means for recording optics is turned away at a predetermined angle  $\alpha$  in a curved course compared to the optical axis (OA) originating from the centre of the target (T), while the optical unit is tilted to an extent which is increased by a half of the displacement angle with an angle  $\alpha/2$  of the means for recording optics (**col. 3, lines 31 – 35**). The purpose of doing this is to make book copying fully enabled and satisfactory (**col. 4, lines 6 – 8; col. 1, lines 19 – 26; col. 3, lines 28 – 35**); and to eliminate the distortions (**This is evidenced by Xu et al. (US Patent Application Publication 2002/0085248) that without turning the recording optics, the scanned image is distorted in the center book bound part (Fig. 1)**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for optical recording means and mirror, as taught by Bock. The motivation for doing this is that to make book copying fully enabled, as discussed by Bock (**col. 4, lines 6 – 8**).

Regarding claim 13 (depends on claim 11), Alderton discloses the method further comprising a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 14 (depends on claim 3), Alderton discloses the method further comprising a mirror (M) as the optical unit (**#14 mirror in Figure**).



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Regarding claim 15, Alderton discloses a method for imaging a primarily two-dimensional target (T), comprising:

matching at least one optical unit (M) adapted for influencing the direction of rays of light falling onto the target (T) (**#14 mirror and side #16 of the prism #12 in Figure**);

pressing down a surface of the target (T) by the at least one optical unit (M) to gain a flat surface for mapping (**side #18 of prism #12 pressed against #30 in Figure**);

illuminating the target (T) with homogenous diffused light while directing an optical recording device to the optical unit (M) (**#17 in Figure, col. 2, lines 55 – 60**);

mapping the points of the target (T) reaching the optical recording device through the optical unit by projecting rays originating from pixels of the target (T) at right angles to the target (T) through the optical unit (M) to a sensor of the optical recording device in the whole range of the optical angle of the optical recording device (**col. 2, line 67 to col. 3, line 6**); and

displacing the optical recording device (**#28 in Figure**) in a receding manner from a plane of the target (T).

However, Alderton fails to explicitly disclose wherein the method wherein eliminating reflections and ghost images deteriorating the resulting image by turning away the optical recording device at a predetermined angle  $\alpha$  in a curved course compared to the optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle  $\alpha/2$  of the optical recording device.

However, in a similar field of endeavor Bock discloses a method for copying bound books. In addition, Bock discloses the method wherein turning away the optical recording device at a predetermined angle  $\alpha$  in a curved course compared to the optical axis (OA) originating from a centre of the target (T) while tilting the optical unit half to an extent of said displacement with an angle  $\alpha/2$  of the optical recording device (**col. 3, lines 31 – 35**). The purpose of doing this is to make book copying fully enabled and satisfactory (**col. 4, lines 6 – 8; col. 1, lines 19 – 26; col. 3, lines 28 – 35**); and to eliminate the distortions (**This is evidenced by Xu et al. (US Patent Application Publication 2002/0085248) that without turning the recording optics, the scanned image is distorted in the center book bound part (Fig. 1)**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton, and rotate an angle for the means for recording optics and mirror, as taught by Bock. The motivation for doing this is to make book copying fully enabled, as discussed by Bock (**col. 4, lines 6 – 8**).

Regarding claim 17 (depends on claim 15), Bock discloses the method further comprising choosing the value of the angle  $\alpha$  exceeding at least the half of the optical angle of the optical recording device (**From Fig. 4 of current invention, the half of the optical angle of the optical recording means is about 10 degree. Bock discloses the rotating angle  $\theta$  can exceed 10 degree in the book binding area**).

Regarding claim 18 (depends on claim 15), Alderton discloses the method further comprising a mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 19 (depends on claim 15), Alderton discloses the method further comprising a surface mirror (M) as the optical unit (**#14 mirror in Figure**).

Regarding claim 20 (depends on claim 1), Alderton discloses the method wherein the optical unit is wedge shaped and composed of a pressing-down glass plate (G) and a surface mirror (M) (**#14 mirror and the glass prism #12 in Figure**).

5. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alderton in view of Bock, and in further view of Wu et al. (US Patent 5,847,846), hereinafter referred as Wu.

Regarding claim 8 (depends on claim 1), Bock discloses that the mirror can be tilted (**col. 3, lines 31 – 35**).

However, Alderton in view of Bock fails to explicitly disclose the method further comprising scanning both pages of the opened book (B) used as the target (T) consecutively by a mirror (M) embedded into a wedge-shaped element, but without removing the wedge-shaped element from between the glass plates (G) constituting its boundaries.

However, in a similar field of endeavor Wu discloses a method for copying bound books. In addition, Wu discloses the method scanning both pages of the opened book used as the target consecutively by a mirror (M) embedded a the wedge-shaped element (**Fig. 3, #14**), but without removing the wedge-shaped element from between the glass plates (G) constituting its boundaries (**col. 3, lines 27 - 48**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton in view of Bock, and scanning both pages of the opened book used as the target consecutively by a mirror embedded into a wedge-shaped element, but without removing the wedge-shaped element from between the glass plates constituting its boundaries, as taught by Wu. The motivation for doing this is to sequentially record opposing pages of bound document positioned thereon using a single image station, as discussed by Wu (**in abstract**).

Regarding claim 10 (depends on claim 1), Alderton in view of Bock fails to explicitly disclose the method further comprising applying a light source (L) assembled of several discrete light sources.

However, in a similar field of endeavor Wu discloses a method for copying bound books. In addition, Wu discloses the method characterized by applying a light source (L) assembled of several discrete light sources (**Fig. 1, #23 and #25**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Alderton in view of Bock, and

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applying a light source (L) assembled of several discrete light sources, as taught by Wu.

The motivation for doing this is that the both sides of book pages can be properly illuminated and calibrated, as disclosed by Wu (**col. 6, lines 37 – 41**).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 3 – 8, 10, 11, 13 – 15 and 17 – 20 have been considered.

#### Claim Objection

The claim objection for claim 1 is removed because of the claim amendment.

#### Claim Rejections

Regarding claims 1, 11 and 15, the applicant alleges: “Among the problems solved by the present invention are those arising from reflections and ghost images. This problem is address by flattening the mapping surface and by performing the geometrical manipulations set forth in the instant independent claims.

As disclosed in the specification, there are two considerations regarding the known issues of book scanners: first, lowering the opening angle of the book to be scanned as much as possible and second, eliminating the reflections and ghost images resulting from the scanning scenario.

Both needs can be fulfilled by turning away the recording lens and the mirror in the manner indicated in the independent claims.

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Distinctions of the present invention over the applied art have been made of record in the application which, for brevity, are not repeated in full here.

In short, the arrangement of ALDERTON (reproduced below), without turning, could produce harmful reflections, and ALDERTON does not in the least deal with this problem. ALDERTON thus neither discloses nor infers any solution to the elimination of such reflections and ghost images.

Similarly, BOCK does not contain any teaching or inference: 1) to eliminate the formation of reflections and ghost images arising in scanning processes with known book scanners, and 2) how this eliminating is put into practice.

**The Examiner agrees that ALDERTON does not teach a solution to the elimination of such reflections and ghost images.**

**However, BOCK teaches “(b)ecause of the tilted nature of lens 86, light from the binding areas is transmitted and book copying fully enabled” (col. 4, lines 6 – 8).**

**This is to say without turning away an angle for lens or mirror, the binding areas can not be transmitted and book copying is not fully enabled. This is evidenced by Xu et al. (US Patent Application Publication 2002/0085248) that without turning the recording optics, the scanned image is distorted in the center book bounding area (Fig. 1).**

**Therefore, BOCK teaches eliminating distortion or noise image by turning away an angle for lens or mirror.**

The applicant further alleges: “However, the Office Action persists in viewing the

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present invention as having the aim "to make some part of the book more illuminated."

However, this is not true. Although the technology of the illumination can play an important role in the end result, it is a common practice for a person skilled in the art to design the illumination and arrange the lamps or other illuminating means so that surfaces to be recorded will be properly highlighted.

Thus, it is the Office's unintended misinterpretation of the aim of the invention set forth in the disclosure that all features have been chosen in order to make some parts more illuminated.

**This is stated by BOCK (col. 3, lines 27 – 29) “the system axis rotated by a small angle to allow the binding area 60 of the book to be more fully illuminated.”**

The applicant still further alleges: “In light of this, the independent claims of the present invention have been amended to more clearly set forth the technology that eliminations deleterious reflections and ghost images by "pressing down a surface of the target (T) by the at least one optical unit (M) to gain a flat surface for mapping," by "by applying a light source (L) providing homogenous diffused light," and by "eliminating reflections and ghost images deteriorating the resulting image by turning away the means for recording optics and displacing in a receding manner from a plane of the target (T) at a predetermined angle  $\alpha$  in a curved course compared to an optical axis (OA) originating from a centre of the target (T) while tilting the optical unit (M) half to an extent of said displacement with an angle  $\alpha/2$  of the means for recording optics." See, e.g., claim 1.”

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**The rejection for claim 1 fully addressed claimed limitations (see rejections for the details).**

**Therefore, ALDERTON in view of BOCK reads on the claimed limitation of claim 1 (similar as claims 11 and 15).**

Regarding the rest of claims, the Applicant does not argue about the rest of claims.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QIAN YANG whose telephone number is (571)270-7239. The examiner can normally be reached on Monday-Friday 8:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on 5712727490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO



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